

Application No. 10/804,332
Amendment dated January 10, 2006
Reply to Office Action of November 10, 2005

Docket No.: 60680-1894

AMENDMENTS TO THE CLAIMS

1. (Original) A system for reducing microwelding of a piston ring to a piston, comprising:

a piston ring having a surface coated with a composition of a polyaryletherketone polymer.

2. (Original) The system of claim 1, wherein said piston ring includes a cylinder wall engaging surface and at least one piston groove engagement surface wherein only said piston groove engagement surface is coated with said composition.

3. (Original) The system of claim 2, wherein said piston ring includes an upper radially extending surface and a lower radially extending surface, wherein said piston groove engaging surface of said piston ring comprises said lower surface.

4. (Original) The system of claim 1, wherein said ring is comprised of cast iron.

5. (Original) The system of claim 1, wherein said ring is comprised of steel.

6. (Original) A system for reducing microwelding of a piston ring to a piston, comprising:

a piston adapted to reciprocate within a combustion chamber of an engine, wherein said piston includes walls extending radially inwardly from an outer radial surface of said piston, said walls defining a circumferential groove; and a piston ring disposed within said circumferential groove, said ring including a cylinder wall engaging surface and at least one piston groove engaging surface, wherein at least one of said piston groove engaging surface of said ring and said circumferential piston groove is coated with a composition of a polyaryletherketone polymer.

7. (Original) The system of claim 6, wherein said piston is comprised of aluminum.

8. (Original) The system of claim 7, wherein said ring is comprised of one of cast iron and steel.

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9. (Original) The system of claim 6, wherein said ring includes an upper radially extending surface and a lower radially extending surface, wherein said piston groove engaging surface comprises said lower radial surface.

10. (Original) A method for reducing microwelding of a ring to a piston, comprising the steps of:

depositing on a surface of a piston ring a composition comprising a polyaryletherketone polymer, and

curing said composition by exposing said piston ring to an elevated temperature for a predetermined period of time.

11. (Currently Amended) The method of claim 7 10, wherein said depositing step further includes depositing said composition only on a bottom portion of said piston ring.

12. (New) The system of claim 1, wherein the polyaryletherketone polymer comprises repeating units of oxy-1,4-phenylene-oxy-1,4-phenylene-carbonyl-1,4 phenylene.

13. (New) The system of claim 6, wherein the polyaryletherketone polymer comprises repeating units of oxy-1,4-phenylene-oxy-1,4-phenylene-carbonyl 1,4 phenylene.

14. (New) The method of claim 10, wherein the polyaryletherketone polymer comprises repeating units of oxy-1,4-phenylene-oxy-1,4-phenylene-carbonyl 1,4 phenylene.